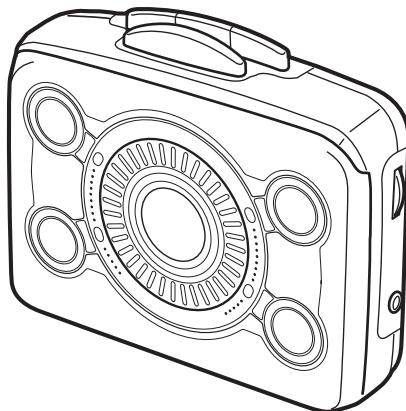




**HS-GS202**

Y,YJ



# SERVICE MANUAL

---

STEREO CASSETTE PLAYER

BASIC TAPE MECHANISM : 4ZM-2 P3NC2

---

**aiwa**  
S/M Code No. 09-99C-422-9R1

REVISION

## SPECIFICATIONS

<b>Maximum output:</b>	4 mW + 4 mW (EIAJ/16 ohm) <Y>
	15 mW + 15 mW (EIAJ/32 ohm) <YJ>
<b>Power source:</b>	DC 3V using two R6 (size AA) batteries
<b>Maximum dimensions:</b>	116.6 (W) x 92 (H) x 35 (D) mm (4 <sup>5</sup> / <sub>8</sub> x 3 <sup>5</sup> / <sub>8</sub> x 1 <sup>7</sup> / <sub>16</sub> in.)

**Weight** Approx.116.8 g (4 oz) (excluding batteries)

- Design and specifications are subject to change without notice.

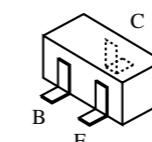
## ACCESSORIES / PACKAGE LIST

REF.NO.	PARTNO.	KANRI NO.	DESCRIPTION
1	8A-HG8-901-010	IB, Y(EGFSI) <Y>	
1	8A-HG8-902-010	IB, Y(EDPOHCZ) <Y>	
1	8A-HG8-906-010	IB, YJ(ESC) <YJ>	
2	84-447-019-310	CLIP, BELT	
3	87-B30-168-210	HEADPHONE, HP-M006 (K)	

## ELECTRICAL MAIN PARTS LIST

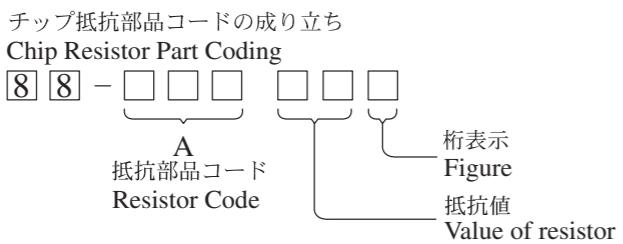
REF.NO.	PARTNO.	KANRI NO.	DESCRIPTION	REF.NO.	PARTNO.	KANRI NO.	DESCRIPTION
IC				C21	87-A11-726-080	C-CAP,S 0.33-16 Z F	
87-A21-387-040	C-IC,TA2145F			C51	87-A11-733-080	C-CAP,S 1-16 Z F	
				C52	87-A11-733-080	C-CAP,S 1-16 Z F	
				C53	87-A10-489-040	CAP,E 220-4 7L SR	
				C301	87-A11-559-080	C-CAP,S 3300P-50 K B	
TRANSISTOR				C302	87-A11-559-080	C-CAP,S 3300P-50 K B	
87-026-264-080	C-TR,RN1411			C303	87-A11-596-080	C-CAP,S 0.068-16 K B	
87-026-268-080	C-TR,RN2411			C304	87-A11-596-080	C-CAP,S 0.068-16 K B	
89-327-125-080	C-TR,2SC2712GR			C305	87-A11-733-080	C-CAP,S 1-16 Z F	
				C306	87-A11-733-080	C-CAP,S 1-16 Z F	
DIODE				C307	87-A11-587-080	C-CAP,S 0.039-16 K B	
87-020-027-080	C-DIODE,ISS184			C308	87-A11-587-080	C-CAP,S 0.039-16 K B	
				C309	87-A11-560-080	C-CAP,S 3900P-50 K B	
				C310	87-A11-560-080	C-CAP,S 3900P-50 K B	
				C311	87-A11-563-080	C-CAP,S 5600P-50 K B	
MAIN C.B				C312	87-A11-563-080	C-CAP,S 5600P-50 K B	
C1	87-A11-554-080	C-CAP,S 1800P-50<EXCEPT[LM]Y>		C313	87-015-676-040	E/CAP 47/6.3	
C1	87-A11-556-080	C-CAP,S 2200P-50 KB<[LM]Y>		C315	87-A11-581-080	C-CAP,S 0.027-16 K B	
C2	87-A11-554-080	C-CAP,S 1800P-50 K B		C316	87-A11-581-080	C-CAP,S 0.027-16 K B	
C2	87-A11-556-080	C-CAP,S 2200P-50 K B		C317	87-A11-733-080	C-CAP,S 1-16 Z F	
C3	87-010-500-040	CAP,E 33-4		C318	87-A11-733-080	C-CAP,S 1-16 Z F	
C4	87-015-675-040	CAP,E 33-6.3 M SRA		C319	87-A11-733-080	C-CAP,S 1-16 Z F	
C5	87-A11-565-080	C-CAP,S 8200P-50 K B		C320	87-A11-733-080	C-CAP,S 1-16 Z F	
C6	87-A11-565-080	C-CAP,S 8200P-50 K B		J1	85-HRL-623-010	JACK,3.5 ST BLK	
C7	87-A11-551-080	C-CAP,S 1000P-50 K B		R53	87-A00-530-080	C-RES,S 180-1/10W F	
C8	87-A11-551-080	C-CAP,S 1000P-50 K B		SFR51	87-024-197-010	SFR,1K H VZ06613	
C9	87-A11-569-080	C-CAP,S 0.012-50 K B		SW1	87-A90-133-110	SW,LEAF LSA1120JAU	
C10	87-A11-569-080	C-CAP,S 0.012-50 K B		SW2	87-A90-917-010	C-SW,SL 1-1-2 SS-350	
C11	87-A11-553-080	C-CAP,S 1500P-50 K B		VR1	87-A90-981-010	VR,RTRY 20KBX1	
C12	87-A11-553-080	C-CAP,S 1500P-50 K B					
C14	87-010-498-040	CAP,E 10-16 GAS					
C15	87-A11-718-080	C-CAP,S 0.1-25 Z F		FRONT C.B			
C16	87-A11-733-080	C-CAP,S 1-16 Z F		SW301	87-A91-285-010	C-SW,SL 1-1-4	
C17	87-A10-489-040	CAP,E 220-4 7L SR					
C18	87-A10-489-040	CAP,E 220-4 7L SR					
C20	87-A11-726-080	C-CAP,S 0.33-16 Z F					

## TRANSISTOR ILLUSTRATION



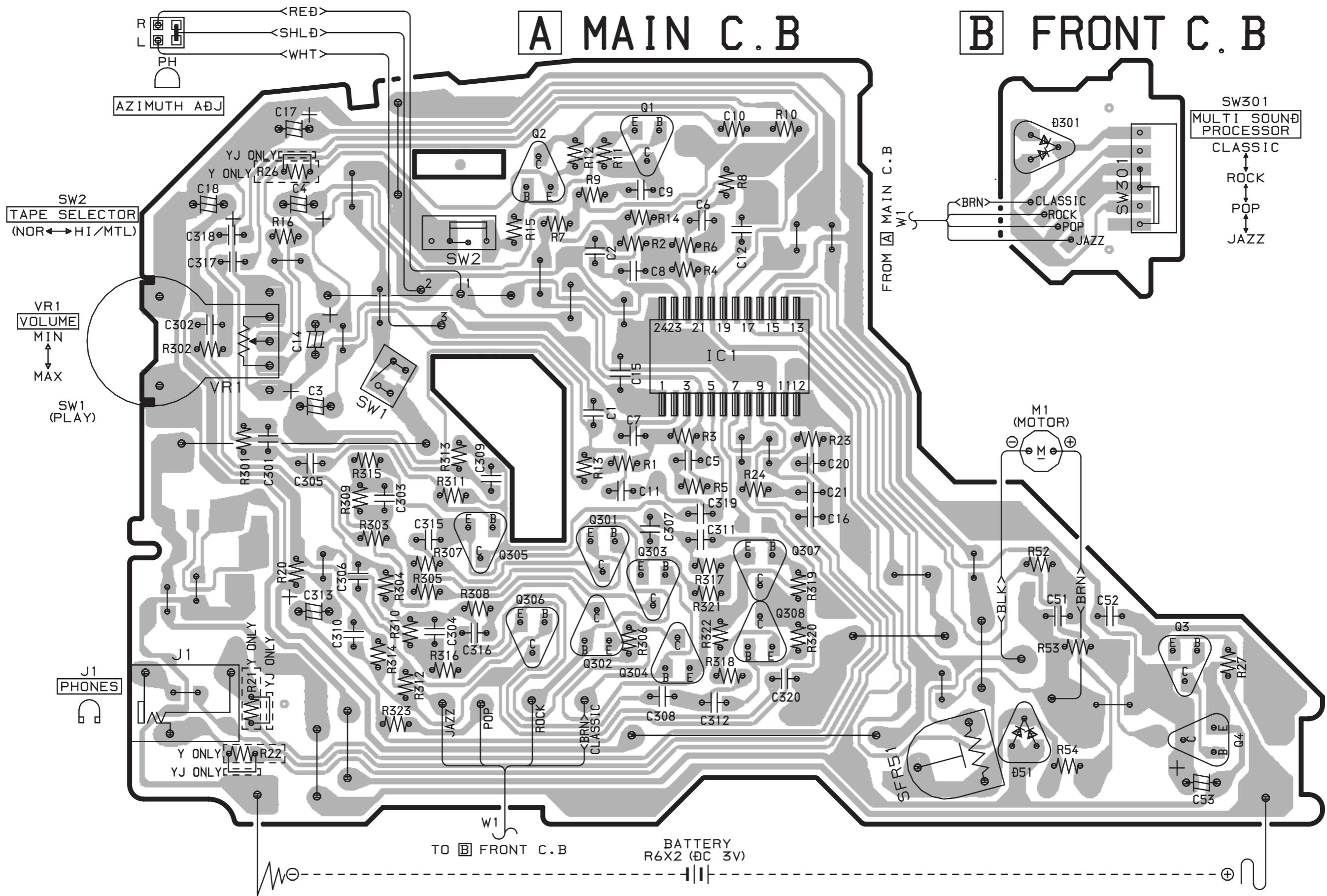
RN1411  
RN2411  
2SC2712

### ○チップ抵抗部品コード／CHIP RESISTOR PART CODE

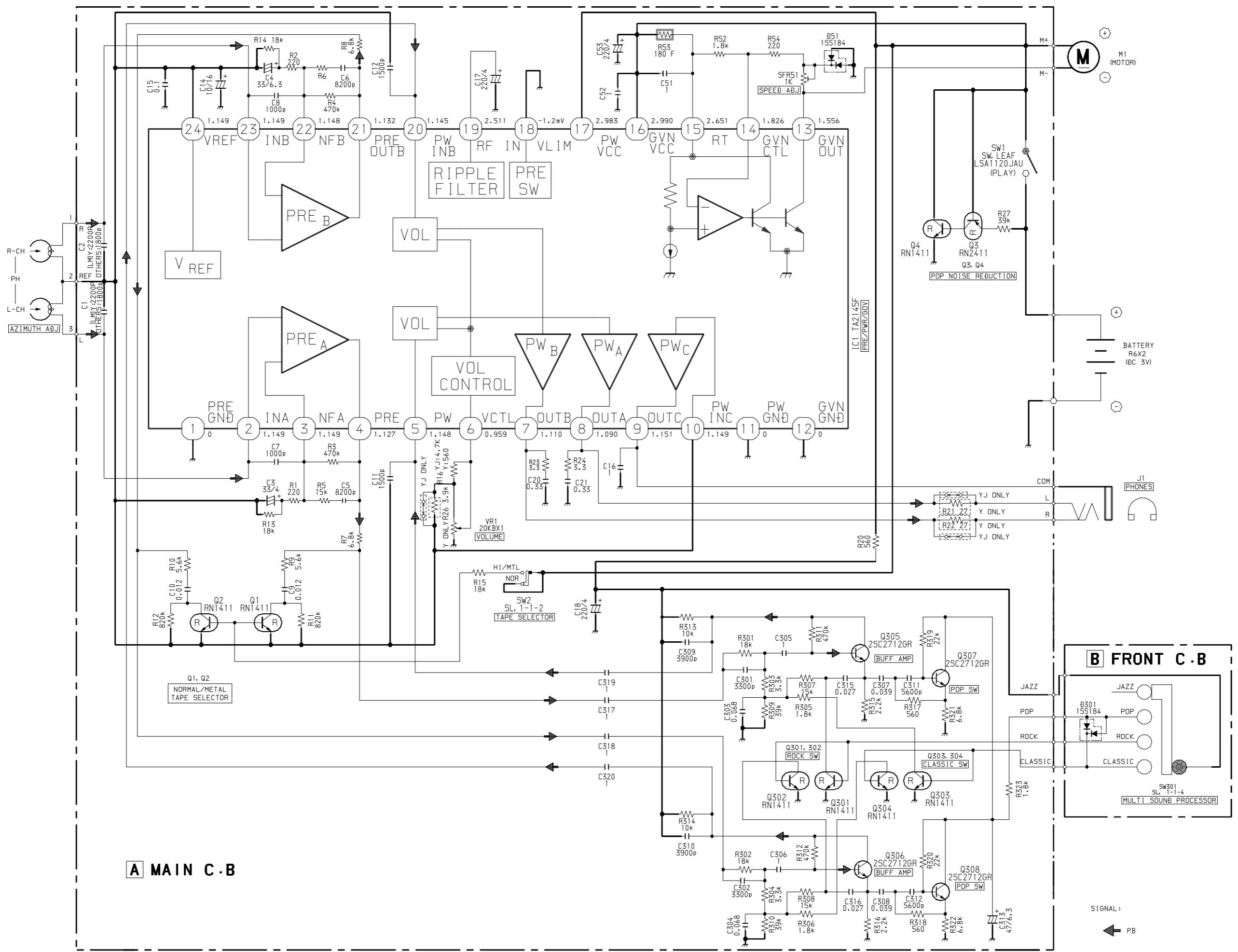


### チップ抵抗 Chip resistor

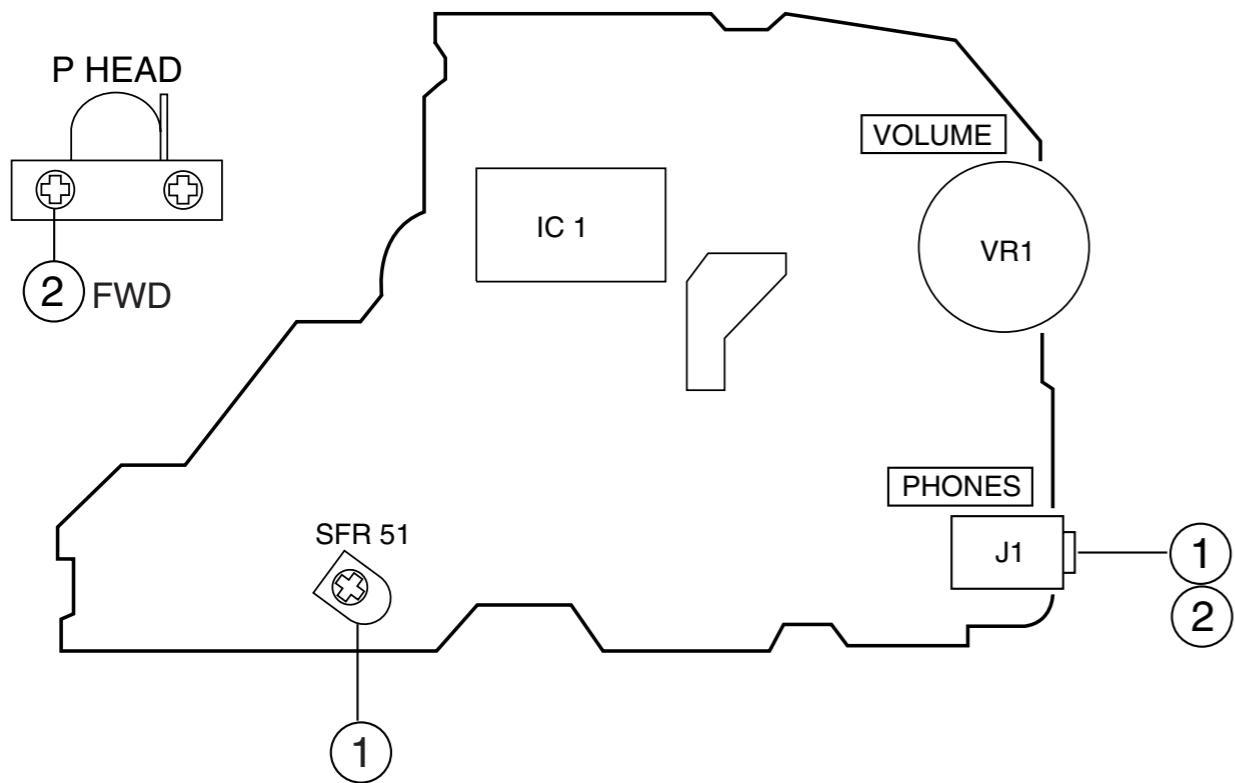
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法/Dimensions (mm)			抵抗コード : A Resistor Code : A	
				外形/Form	L	W		
1/16W	1005	±5%	CJ		1.0	0.5	0.35	104
1/16W	1608	±5%	CJ		1.6	0.8	0.45	108
1/10W	2125	±5%	CJ		2	1.25	0.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.55	128



# SCHEMATIC DIAGRAM



## A MAIN C.B



## 1. Tape Speed Adjustment

Settings : 

- Test tape : TTA - 100 (Tape center)
- Test point : Phones Jack (J1)
- Adjustment location : SFR51
- MSP : CLASSIC
- Tape selector : NORM
- Volume : Non - clip (MAX - 10dB)

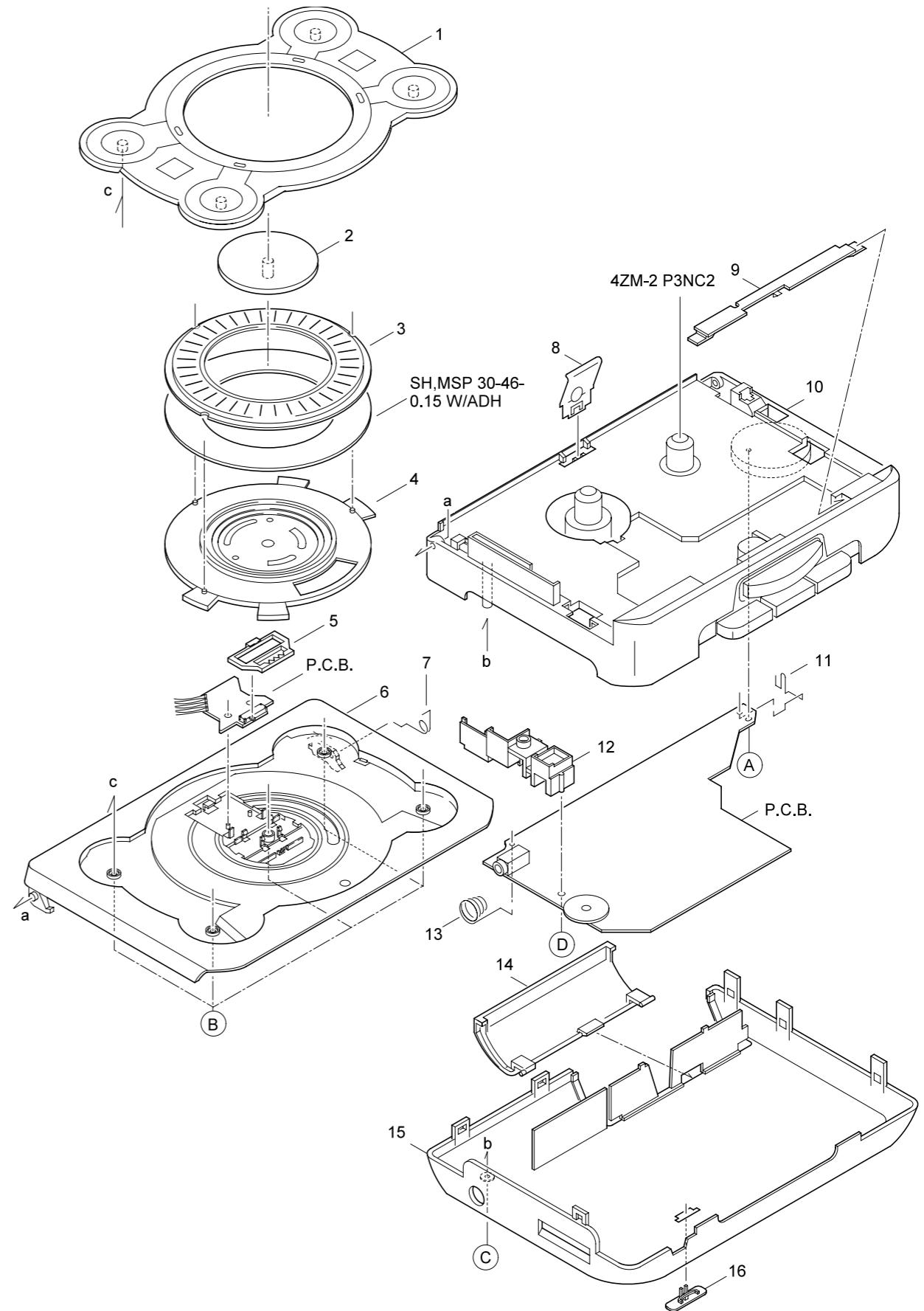
Method : Play back the test tape and adjust SFR51 so that the frequency becomes 3000Hz  $\pm$  10Hz. Then confirm WOW is less than 0.50%.

## 2. Azimuth Adjustment

Setting : 

- Test tape : TTA - 330 / TTA - 420
- MSP : CLASSIC
- Volume : MAX
- Tape selector : NORM
- Adjustment location : Head azimuth adjustment screw

Method : Play back (FWD) the test tape and adjust screw so that the 8kHz signal output is maximum.



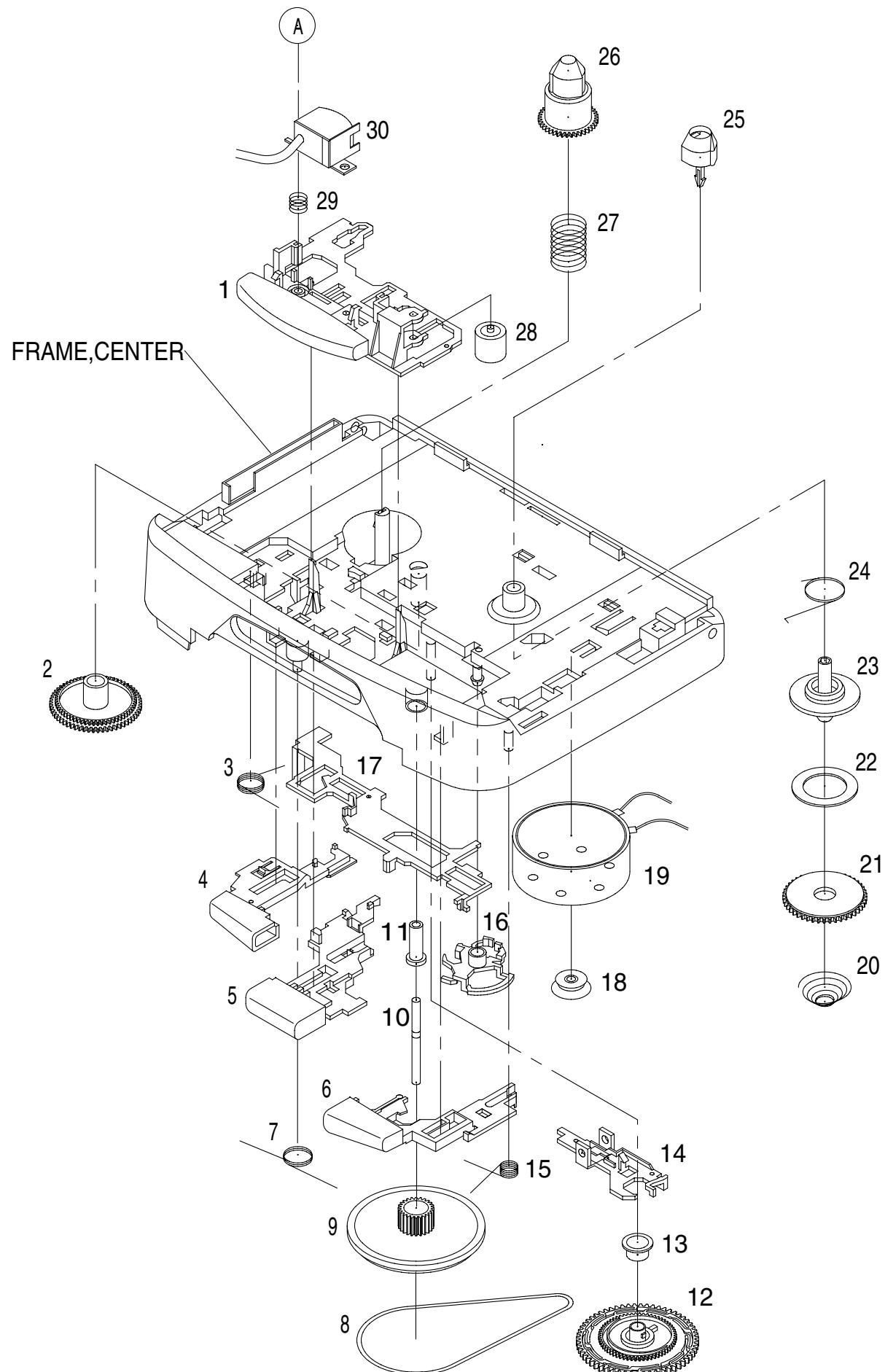
# MECHANICAL PARTS LIST 1 / 1

REF.NO.	PARTNO.	KANRI NO.	DESCRIPTION
1	8A-HG8-002-010		PANEL, MSP
2	8A-HG8-005-010		CAP, MSP
3	8A-HG8-003-010		KNOB, RTRY MSP
4	8A-HG8-004-010		PLATE, INDICATOR
5	8A-HG8-201-010		RACK, MSP
6	8A-HG8-001-010		LID, CASS<[S]YJ>
6	8A-HG8-015-010		LID, CASS Y1 J008N<[S]Y>
6	8A-HG8-016-010		LID, CASS Y1 J274B<[LM]Y>
7	86-HRM-205-010		SPR-T, CLICK
8	8A-HRL-202-010		SPR-P, CASS
9	87-HRR-206-010		PLATE, HEAD J034
10	88-HRJ-038-010		FRAME, CENTER J034
11	86-HKA-202-010		BAT-CONTACT, (+)
12	8Z-HG8-202-010		HLDL, DC JACK
13	8Z-HG8-203-010		BAT, CONTACT(-)
14	8Z-HG8-018-010		LID, BATT J049N<EXCEPT [LM]Y>
14	8A-HG8-021-010		LID, BATT J274B<[LM]Y>
15	8Z-HG8-016-010		CABI, REAR J049N<[S]YJ>
15	8A-HG8-012-010		CABI, REAR Y1 J274B<[LM]Y>
15	8Z-HG8-027-010		CABI, REAR YZ J049N<[S]Y>
16	8Z-HGA-013-010		KNOB, SL TAPE J<EXCEPT [LM]Y>
16	8A-HG8-031-010		KNOB, SL TAPE J274B<[LM]Y>
A	87-264-525-310		SCREW, V+1.7-2.5
B	87-067-732-010		TAPPING SCREW, VT1.4-3
C	87-067-691-010		SCREW VT+1.7-6
D	87-067-384-010		SCREW VT1.4-3.5HL

## COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow				

# TAPE MECHANISM EXPLODED VIEW 1 / 1



# TAPE MECHANISM PARTS LIST 1 / 1

REF.NO.	PARTNO.	KANRI NO.	DESCRIPTION
1	84-ZM2-012-010		LEVER, PLAY G
2	84-ZM2-211-01K		GEAR, CONNECT
3	84-ZM2-222-010		SPR-T, PLAY
4	84-ZM2-015-010		LEVER, STOP G
5	84-ZM2-014-010		LEVER, REW G
6	84-ZM2-013-010		LEVER, FF G
7	84-ZM2-223-010		SPR-T, REW STOP
8	84-ZM2-232-010		BELT, MAIN
9	84-ZM2-221-010		FLY-WHL, P2
10	84-ZM2-230-010		CAPSTAN, P 1.8-25
11	84-ZM2-220-01K		BRG, P
12	84-ZM2-210-01K		GEAR, AUTO
13	84-ZM2-218-01K		CAP, GEAR AUTO
14	84-ZM2-208-01K		LEVER, SHIFT
15	84-ZM2-224-010		SPR-T, FF LOCK
16	84-ZM2-207-01K		LEVER, AUTO
17	84-ZM2-206-01K		LEVER, LOCK
18	84-ZM2-219-01K		PULLEY, MOTOR
19	87-045-385-019		MOT (BCY3B11)
20	84-ZM2-226-010		SPR-C, CLUTCH
21	84-ZM2-212-01K		GEAR, CLUTCH
22	84-ZM2-231-019		FELT, CLUTCH
23	84-ZM2-217-01K		SHAFT, REEL
24	84-ZM2-225-010		SPR-T, AUTO FIND
25	84-ZM2-216-01K		REEL TABLE, R
26	84-ZM2-215-01K		REEL TABLE, L
27	84-ZM2-228-010		SPR-C, BT
28	84-ZM2-233-110		PINCH ROL ASSY
29	84-ZM2-227-010		SPR-C, AZIMUTH
30	87-A90-272-010		HEAD, PH MS25P ETH
A	84-ZM2-242-019		S-SCREW, AZIMUTH-2-5.9

L▶

A4▶

サービス技術ニュース	
番号	連絡内容
G- -	
G- -	
G- -	

**アイワ株式会社** 〒110-8710 東京都台東区池之端1-2-11 ☎03(3827)3111 (代表)

**AIWA CO.,LTD.** 2-11, IKENOHATA 1-CHOME, TAITO-KU, TOKYO 110, JAPAN TEL:03(3827)3111

9630469 9630472 0251431

Printed in Singapore